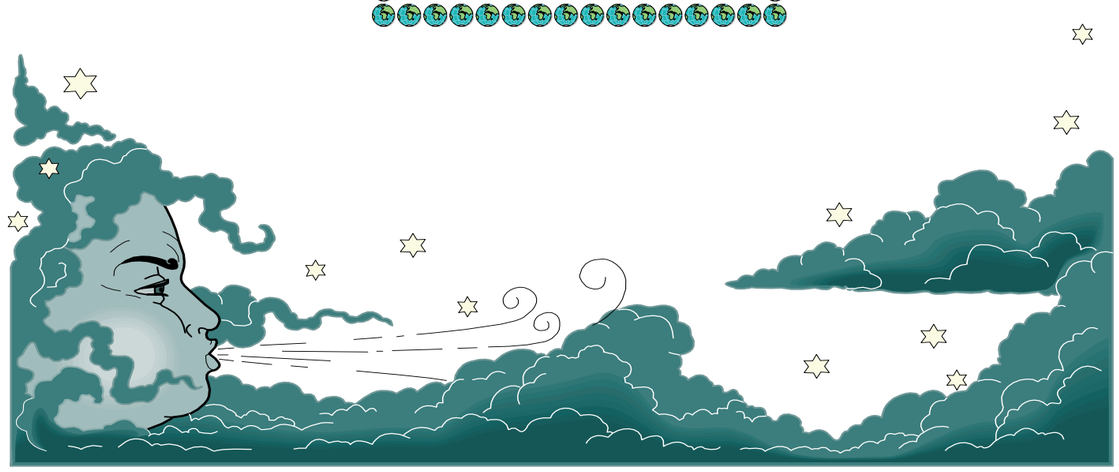
Heat Index Chart

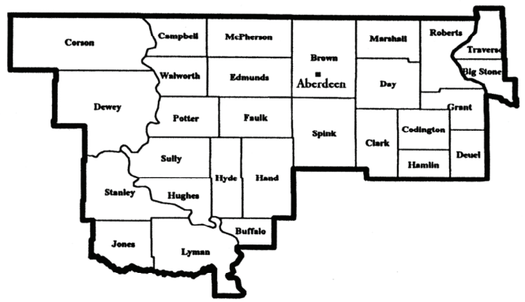
Temp (F)	Dew Point (F) 50	55	60	65	70	75	80	85	
65:	63	64	65	67					
70:	68	69	70	71	73				
75:	73	74	75	76	79	81			
80:	80	81	82	83	84	87	91		
85:	84	85	86	88	91	94	99	107	Apparent
90:	88	89	91	94	97	101	107	116	Temperature
95:	93	95	97	100	103	108	115	124	
100:	98	100	102	106	110	115	123	132	
105:	103	105	108	112	116	122	130	140	
110:	109	111	114	118	122	128	136	147	

National Weather Service
824 Brown Co 14 S
Aberdeen SD 57401

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

The oldest voice in the world is the wind.
Donald Culrose Peattie





SKY SCANNER

National Weather Service Forecast Office
Aberdeen, South Dakota

July 2004

A Chilly Patriotic Day

by Amy Liles

The Fourth of July this year felt more like mid-September in northeastern South Dakota and west central Minnesota. Normal highs this time of year are in the lower to mid 80s. Highs reached only into the lower 70s on the Fourth in northeastern South Dakota, and conditions worsened for the fifth and sixth of July. A series of upper level disturbances rotated over the Upper Midwest bringing widespread rainfall and scattered thunderstorms to the region. The upper level low moved slowly as it continued to funnel in cool Canadian air. With the rainfall, low clouds, and a cool air mass in place, the sun could not warm temperatures much at all. In fact, many locations across South Dakota hit record low maximum temperatures on both July fifth and sixth. The following are lists of low maximum temperature records that were broken on the fifth and sixth of July 2004 in central and northeastern South Dakota and extreme west central Minnesota:

July 5th, 2004
Aberdeen…60 degrees…old record was 62 set in 1909.
Pierre…63 degrees…old record was 71 set in 1951.
Mobridge…61 degrees…old record was 67 set in 1951.
Sisseton…64 degrees…old record was 65 set in 1995.
Wheaton MN…64 degrees…old record was 72 set in 1983.

July 6th, 2004
Aberdeen…63 degrees…old record was 65 set in 1918.
Watertown…60 degrees…old record was 66 set in 1909.
Sisseton…58 degrees…old record was 67 set in 1904.
Timber Lake…67 degrees…old record was 68 set in 1979.
Wheaton MN…55 degrees…old record was 70 set in 1951.

How does this year compare with past Independence Days? Aberdeen hit a high of 72 on the Fourth of July this year which makes it the sixth coldest in recorded history. The coldest Fourth of July on record for Aberdeen was in 1909 when the high temperature reached only 61. Sisseton hit a high of 72 this year on the Fourth making it the sixth coldest in recorded history as well. The coldest recorded Fourth in Sisseton was in 1932 when the high temperature reached 66. The high temperature on the Fourth of July in Wheaton, Minnesota was only 66 this year making it the third coldest on record. The coldest recorded Independence Day in Wheaton was in 1932 when the high temperature was 62.

INSIDE THIS ISSUE:

TURN AROUND DON'T DROWN

Each year, more deaths occur due to flooding than from any other severe weather related hazard. Why? The main reason is people underestimate the force and power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around barriers that warn of a flooded road.

Whether you are driving or walking, if you come to a flooded road, **Turn Around Don't Drown™.** You will not know the depth of the water nor will you know the condition of the road under the water.

Follow these safety rules:

- Monitor the NOAA Weather Radio, or your favorite news source for vital weather related information.
- If flooding occurs, get to higher ground. Get out of areas subject to flooding. This includes dips, low spots, canyons, washes etc.
- Avoid areas already flooded, especially if the water is flowing fast. Do not attempt to cross flowing streams. **Turn Around Don't Drown™.**
- Road beds may be washed out under flood waters. NEVER drive through flooded roadways. **Turn Around Don't Drown™.** If your vehicle is suddenly caught in rising water, leave it immediately and seek higher ground.
- Do not camp or park your vehicle along streams and washes, particularly during threatening conditions.
- Be especially cautious at night when it is harder to recognize flood dangers.

For more information go to: http://tadd.weather.gov/

We're on the Internet
http://www.crh.noaa.gov/abr

Skywarn Spotter Training

Spotter Training season was a huge success this year. We would like to thank the Emergency Managers who helped get classes set up and the word out, and a special thanks to the hundreds of people who attended training this year.

We conducted 37 Spotter Training Classes, training 694 people, with classes being held in 26 of our 28 counties. We average about 500 people at Spotter training each year, and generally have around 1000 Spotters trained and current. Current Spotters are those who have attended training within the last 2 years (2004, 2003). After dropping off those who haven't been trained recently, there are now 1176 trained Spotters in this area.

We have 25 Spotters and 5 Emergency Managers registered to use the E-Spotter System. In addition a few people who reside in counties covered by Sioux Falls, Rapid City, Minneapolis, Grand Forks and Bismarck attended our training sessions. We even had one 1 person from Sheridan, Wyoming attend.

We also implemented an Advanced Spotter Program this year, and held training sessions in Mobridge, Aberdeen, Pierre, and Watertown. This training is for serious spotters who are willing to become mobile during severe weather events.

Again – thanks to all who helped or attended! We look forward to receiving your reports.

SKYWARN

National Weather Service to host Open House

You are invited to the National Weather Service office in Aberdeen for an Open House.

Date: October 2nd, 2004
Time: 10:00 am to 2:00 pm

Tours of the office and balloon shelter will be given, and refreshments will be served. Hope to see you there.

New Warning Event Codes Implemented on June 30

On June 30, NOAA implemented new NOAA Weather Radio (NWR) Specific Area Message Encoding/ Emergency Alert System (SAME/EAS) event warning codes for a variety of non-weather events. Non-weather related EAS messages are prepared by local or state civil authorities and may be relayed over NWR and EAS. The NWS does not initiate non-weather related EAS messages.

NWR users will be able to program their receivers to relay only chosen alert messages such as fire warnings, AMBER alerts, local area emergencies, radiological or hazardous material warnings, and earthquake or dust storm warnings. Users who do not want to receive certain kinds of alerts can opt out.

The Federal Communications Commission, which makes the rules concerning EAS, dictated the event code changes. The NWS waited to implement the new EAS event and SAME codes and marine location codes primarily to allow EAS equipment manufacturers time to upgrade their products to accommodate the new codes and to allow broadcasters time to upgrade their EAS equipment.

NWS is upgrading existing warning-generation software and weather radio formatters to handle the new codes. NWR receiver owners should check their receiver's documentation or contact the manufacturer to see if the new event codes are already programmed into the receiver or if they can be manually added. If the new event codes cannot be added to existing NWR receivers, the receiver may generate an unknown event alarm.

Owners of non-upgradable radios wishing to receive the new codes would have to purchase a newer model radio receiver. Working together, emergency managers, broadcasters, and the NWS can guarantee a smooth implementation of these new event codes. And, with the use of these new codes, the public can be better prepared for non-weather emergencies.

Following is a list of the new codes implemented into the NWS Aberdeen NOAA Weather Radio system.

Administrative Message
Evacuation Immediate
Child Abduction Emergency
Civil Danger Warning
Earthquake Warning
Fire Warning
Hazardous Material Warning
Local Area Emergency
Law Enforcement Warning
Nuclear Power Plant Warning
Radiological Hazard Warning
Shelter in Place Warning
911 Telephone Outage Emergency
Dust Storm Warning

Additional information on these codes is available at http://www.nws.noaa.gov/os/eas_codes.htm.

Additional information on the emergency alert system is available at http://www.nws.noaa.gov/os/nws_eas.htm and http://www.fcc.gov/eb/eas/.

CHARLES HANSON HONORED FOR CONTRIBUTIONS TO NATIONAL WEATHER SERVICE VOLUNTEER OBSERVER PROGRAM

Recognizing almost 32 years of dedication, NOAA's National Weather Service (NWS) has named rural Artichoke Lake, Minn., resident Charles Hanson a 2004 recipient of the agency's Thomas Jefferson Award for outstanding service in the Cooperative Weather Observer Program. The award is the agency's most prestigious and only 11 are presented this year to deserving cooperative weather observers from around the country. NOAA, the National Oceanic and Atmospheric Administration, is part of the U.S. Department of Commerce.

The NWS Cooperative Weather Observer Program has given scientists and researchers continuous observational data since the program's inception more than 100 years ago. Today, more than 11,000 volunteer observers participate in the nationwide program to provide daily reports on temperature, precipitation and other weather factors such as snow depth, river levels and soil temperature.

Charles established the Artichoke Lake station Sept. 1, 1972, and records daily precipitation and temperature data.

Volunteerism is nothing new to Charles. Along with being a COOP Observer for the past 32 years, Charles has also been a longtime member of Maranatha Volunteers International and has participated in over 20 projects worldwide. Additionally, he was named the Minnesota Waterfowl Association's "Pioneer Conservationist of the Year"(1988). Furthermore, he's a committee member of the Artichoke Lake Restoration Project and a supporting member of the Big Stone County Historic Society and the Big Stone Water Conservation Agency.

Charles received letters of support for his nomination from Minnesota Senators Dayton and Coleman and the Minnesota State Climatologist.

"Our cooperative observers are the bedrock of weather data collection and analysis," said retired Brig. Gen. David L. Johnson, director of NOAA's National Weather Service. "Satellites, high-speed computers, mathematical models and other technological breakthroughs have brought great benefits to the Nation in terms of better forecasts and warnings. But, without the century-long accumulation of accurate weather observations taken by volunteer observers, scientists could not begin to adequately describe the climate of the United States."

Like fine wine, weather records become more valuable with age. Long and continuous records provide an accurate picture fo a locale's normal weather, and give climatologists and others a basis for predicting future trends. At the end of each month, observers mail their records to the National Climatic Data Center (NCDC) for publication in "Climatological Data" or "Hourly Precipitation Data."

The first extensive network of cooperative stations was set up in the 1890s as a result of an 1890 act of Congress that established the U.S. Weather Bureau. Many of the stations have even longer histories. John Campanius Holm's weather records, taken without benefit of instruments in 1644 and 1645, were the earliest known recorded observations in the United States.

Many historic figures have also maintained weather records, including Benjamin Franklin, George Washington and Thomas Jefferson. Jefferson maintained an almost unbroken record of weather observations between 1776 and 1816, and Washington took weather observations just a few days before he died. The Jefferson and Holm awards are named for these weather observation pioneers.

Please join us in extending a hearty congratulations to Charles for a job well done.

2003 Disaster Statistics

by Melinda Albrecht

The 2003 statistics on weather-related injuries, fatalities and damage costs compiled by the NWS Office of Weather Services and the National Climatic Data Center (NCDC) have been released. These statistics outline the number of injuries, fatalities, and damage estimates for each state, Puerto Rico, Guam, the Virgin Islands, and the United States as a whole.

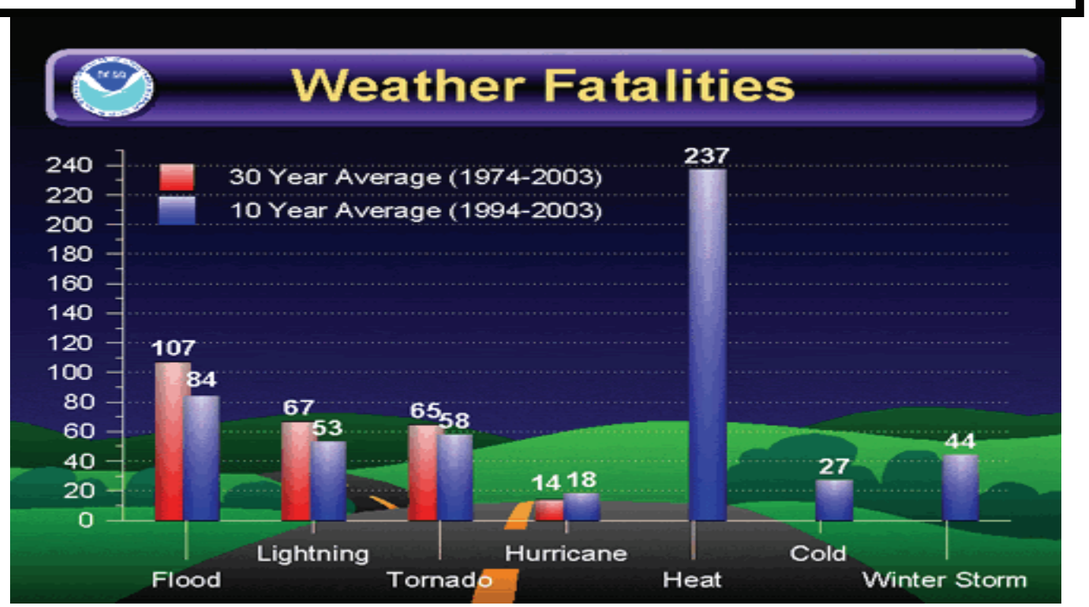
Even with an abundance in severe weather, and one of the largest tornado outbreaks in history, 2003 came out below the 10-year average for weather-related injuries and fatalities. Weather-related injuries dropped to 2,924 from 3,089 in 2002, and weather-related fatalities fell from 542 in 2002 to 438 in 2003. The most dangerous severe weather-related killer in 2003 was flooding with 86 victims, followed by tornadoes with 54 victims, and lightning with 43 victims. Tornadoes were the cause for 37% of weather-related injuries, followed by lightning, tropical storms/hurricanes, and thunderstorm winds each responsible for 8% of weather-related injuries. May was the deadliest month in 2003 with 68 fatalities. The May 5th tornado outbreak across Missouri, Tennessee, and Kansas accounted for 38 of the 68 tornado fatalities in May 2003.

Damage costs from severe weather were much greater in 2003 at $11.4 billion compared to the $5.2 billion in 2002. Fire weather, meaning severe weather contributing to wild fires, was the most costly at $2.330 billion. The second most expensive weather was flooding, accounting for $2.142 billion in damages. Severe weather associated with thunderstorms consisting of tornadoes, thunderstorm winds, and hail were the most detrimental to crops in 2003 with over $182 million in damages. River flooding was next in line with just under $140 million in crop damages.

As for local statistics from South Dakota, one weather-related fatality due to lightning, and 13 weather-related injuries from tornadoes, lightning, and thunderstorm winds occurred in 2003. Eighty-six tornadoes were reported in South Dakota throughout 2003, with a record number 70 tornadoes touching down on June 24th alone. The largest amount of severe weather came in the form of hail and thunderstorm winds with 590 and 252 reports respectively.

An estimated $19.266 million in weather-related property damages were reported in South Dakota during 2003, with the most costly damage coming from tornadoes at $13.540 million and hail at $4.102 million. The two most damaging tornadoes producing $3.0 million in property damages each were the F4 Esmond, SD tornado and the F2 Parker, SD tornado, both occurring on June 24th. Crop damage estimates were unavailable but are still believed to be extensive across areas of South Dakota. In one case alone, a severe storm system producing large hail and damaging winds tore through northeast South Dakota, resulting in 200K-300K acres of damaged crops. The Farm Services Agency estimated the damage costs from that storm system in the $15-$25 million range.

After reading the statistics released by the Office of Weather Services and NCDC above, it is a good reminder of how dangerous weather can be. As we near the middle of summer with many outdoor activities taking place, I would like to remind everyone to take proper precautions when severe weather threatens your area.



The Dog Days of Summer; what exactly are they?

By
David Hintz

What are the dog days of summer? They are traditionally those hot, sultry days during July and August when swimming pools are full and air conditioners strain to keep up. But, what is the true definition of the dog days of summer?

In ancient times before lights and air pollution, people used to be able to look up to the nighttime sky and see a canvas of stars before them. People would use their imagination and connect the dots, drawing pictures of what they saw. These images became constellations. They saw images of bears (Ursa Major and Ursa Minor), twins (Gemini), a bull (Taurus), and others, including dogs (Canis Major and Canis Minor).

The brightest of these stars was Sirius, found in Canis Major. In fact, Sirius is the brightest star in the nighttime sky. It is so bright, that the ancient Romans thought that some of the light Sirius gave off helped to warm the earth.

During the summer, Sirius (the dog star) rises and falls with the Sun. And by the end of July, Sirius is in conjunction, or perfect alignment, with the sun. So, on those hot and steamy days of late July, the Romans were of the belief that the added energy from Sirius was responsible for the added heat experienced at that time. So, for the Romans, “dog days” were the period from 20 days prior to conjunction, to 20 days after conjunction. Today, “dog days” are in a period from July 3rd to August 11th.

Although we now know that any energy given off from Sirius is insignificant compared to the energy received from the sun, the expression “dog days of summer” has survived.

Join us at the Brown County Fair

We will be in the Holum Expo building.

August 17...5 pm-930 pm
August 18-21...11 am-930 pm
August 22...11 am-530 pm

Come see us to find out information about NOAA Weather Radio and the NWS Aberdeen webpage.

Free balloons and pencils for the kids.